

## PATENT COOPERATION TREATY

## PCT



## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 21 JAN 2004

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|---|--|---|--|
| Applicant's or agent's file reference<br>PH/5-70006A  |  | <b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)  |  |
| International application No.<br>PCT/EP 03/03467  | International filing date (day/month/year)<br>02.04.2003 | Priority date (day/month/year)<br>03.04.2002  |  |
| International Patent Classification (IPC) or both national classification and IPC<br>C07D241/18   |  |   |  |
| Applicant<br>SYNGENTA PARTICIPATIONS AG   |  |   |  |
| <p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>   |  |   |  |
| <p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p> |  |   |  |
| Date of submission of the demand<br><br>06.10.2003  |  | Date of completion of this report<br><br>19.01.2004   |  |
| Name and mailing address of the international preliminary examining authority:<br><br> European Patent Office<br>D-80298 Munich<br>Tel. +49 89 2399 - 0 Tx: 523656 epmu d<br>Fax: +49 89 2399 - 4465   |  | Authorized Officer<br><br>Usuelli, A<br><br>Telephone No. +49 89 2399-7366<br><br> |  |

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/EP 03/03467**

**1. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*)

**Description, Pages**

1-75 as originally filed

**Claims, Numbers**

1-10 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/EP 03/03467**

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

**1. Statement**

|                               |             |      |
|-------------------------------|-------------|------|
| Novelty (N)                   | Yes: Claims | 1-10 |
|                               | No: Claims  |      |
| Inventive step (IS)           | Yes: Claims | 1-10 |
|                               | No: Claims  |      |
| Industrial applicability (IA) | Yes: Claims | 1-10 |
|                               | No: Claims  |      |

**2. Citations and explanations**

**see separate sheet**

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**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP03/03467

**Re Item V**

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1- Reference is made to the following document cited in the search report:

D1: WO 01 55066 A (SYNGENTA)

**2- Novelty**

Present compounds of formula (I) differ from the compounds disclosed in d1 on account of present group Q.

Hence, claims 1 to 10 do comply with the requirements of Art.33.2 PCT.

**3- Inventive step**

3.1- The applicant has set himself the task of providing novel agents to be used in the agricultural field as herbicides, for controlling weeds or inhibiting the plant growth.

The results disclosed in Tables B1 and B2 provide the evidence that substantially all the compounds of formula (I) possess the desired activity.

Accordingly, the objective technical problem may be seen in the provision of further herbicides.

3.2- Present compounds are characterised by the presence of a (fused) 6-membered azacyclic group containing at least 2 nitrogens.

The compounds of d1 contain in the corresponding position a substituted phenyl group. It appears that the skilled person faced with the above-defined technical problem, would not find any hint in d1 for replacing the substituted phenyl ring with a heterocyclic group of formula Q, thereby arriving at the present compounds of formula (I). Thus, present compounds of formula (I) appear to represent a non-obvious solution of the technical problem.

Accordingly, present claims are considered to meet the requirements of Art.33.3 PCT.